## REMARKS

Claims 1-26 are pending in the application. Claims 1, 17, 21 and 25 are independent. Reconsideration of the rejections in view of the following remarks is respectfully requested.

### *35 U.S.C. § 112 Rejection*

Claims 1, 17, 21, 25 and 26 were rejected under 35 U.S.C. § 112, second paragraph, for being allegedly indefinite.

The Examiner explains that it is not clear whether Applicants are claiming a sensor which detects the amount of contents within a container or whether Applicants are claiming a sensor which detects the position of the container based on the contents of the container.

Applicants submits that one having ordinary skill in the art having read the specification and the claim language would have no difficulty understanding the claimed invention. Claim 1, for example, clearly recites "at least one sensor which detects whether the bucket assembly has reached a fill capacity at each of" the three recited positions. Sensors performing this function are clearly shown in Fig. 1 as, e.g., reference numbers 120A-120C. As the Examiner will note, these sensors are arranged on the bucket assembly. Moreover, page 7, lines 4-16 of the specification clearly describes sensors 120A-120C as fill capacity sensors for a bucket assembly or a container arranged within the bucket assembly. Claim 1 also clearly recites "a feedback control system which controls an indexing of the bucket assembly" between the three

recited positions. The control C and the sensors participating in this function are clearly shown in Fig. 1 as, e.g., reference numbers 120D and 120E. Moreover, page 7, line 24 to page 8, line 9 of the specification clearly describes sensors 120D and 120E as sensors which detect the position of the bucket assembly or container arranged in the bucket assembly. Claim 17 recites similar features.

With regard to claim 21, Applicants note that this claim recites the detecting of when a container is full in both a first tilt position and an intermediate position. As explained above, the sensors participating in this function are clearly shown in Fig. 1 as, e.g., reference numbers 120D and 120E. Moreover, page 7, line 24 to page 8, line 9 of the specification clearly describes sensors 120D and 120E as sensors which detect the position of the bucket assembly or container arranged in the bucket assembly.

Finally, with regard to claim 25, Applicants note that this claim recites modules for detecting when a container is full in each of the recited positions and for detecting a position of the container. As explained above, the sensors participating in the fill capacity function are clearly shown in Fig. 1 as, e.g., reference numbers 120A-120C and the position sensors are clearly shown in Fig. 1 as, e.g., reference numbers 120D and 120E.

Thus, Applicants submits that the claims are entirely clear and definite and the Examiner has not shown otherwise.

Accordingly, Applicants respectfully submit that the rejection under 35 U.S.C. § 112, second paragraph, should be withdrawn.

***35 U.S.C. § 102 Rejection***

Claims 25 and 26 were rejected under 35 U.S.C. § 102(b) for being allegedly anticipated by U.S. Patent No. 5,865,590 to LILLEY.

In order to establish a *prima facie* case of anticipation under 35 U.S.C. § 102, a single prior art reference must disclose each and every element as set forth in the subject claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). Applicants respectfully submit that a *prima facie* case of anticipation cannot be established because LILLEY fails to teach each and every element of the claims.

More particularly, independent claim 25 recites, *inter alia,*

> a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position;
> a module which detects a position of the container; and
> a module which controls a movement of the container based at least on a capacity of the container.

Applicants are familiar with LILLEY and have examined and seen in operation a commercial embodiment of the LILLEY device. In view of this knowledge and a review of the LILLEY disclosure, Applicants submit that LILLEY does not disclose, or even suggest, any one or more of these features. Applicants acknowledge, for example, that LILLEY teaches a material handler which has a container 3 that can be moved between three distinct positions (see col. 3, lines 19-22). Applicants also acknowledge that LILLEY discloses the use of sensors 28 and 29 (see col. 3, lines 63-65). However, Applicants respectfully submit that, contrary to the instant invention, LILLEY does not

disclose a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position.

Furthermore, Applicants submit that the Examiner has essentially acknowledged in the instant Office Action that LILLEY fails to disclose the features of claim 25. For example, in discussing the obviousness rejection on pages 3-5 of the Final Office Action, the Examiner acknowledges that LILLEY does not disclose a sensor that senses a fill capacity. On the other hand, claim 25 clearly recites a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position. Accordingly, by the Examiner's own admission, this rejection is entirely improper.

Still further, while the Examiner explains that the control unit 12 in LILLEY constitutes each of the recited modules, completely missing from such assertions is the identification of any language in LILLEY which discloses or suggests a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position, and/or a module which detects a position of the container, and/or a module which controls a movement of the container based at least on a capacity of the container. Nor has the Examiner explained how the sensors 28 and 29 in LILLEY are capable of functioning as any of the recited modules, especially since these sensors are disclosed as merely functioning to disable "power to the system when an operator or equipment are in the area of the loading end of the container." See col. 3, lines 63-65.

Applicants submit that such language is hardly suggestive of, for example, a module which detects when a container is full at a first tilt position, an intermediate tilt

position and an upright position. It is also clear that LILLEY lacks any disclosure or suggestion with regard to a module which detects a position of the container. Again, a sensor "for disabling power to the system when an operator or equipment are in the area of the loading end of the container" is entirely different from a module which controls a movement of the container based at least on a capacity of the container.

Finally, it is clear that LILLEY lacks any disclosure or suggestion with regard to a module which controls a movement of the container based at least on a capacity of the container. Clearly, the disclosed sensors do not control the movement of the container based at least on a capacity of the container. Applicants note that the Examiner has failed to identify any language in LILLEY which discloses or suggests anyone of more of these features.

The Examiner is respectfully directed to col. 5, lines 20-35 of LILLEY, which discloses the following:

> Flow to the dump cylinders 9, 10 may be interrupted by the operator to control the degree of rotation of the container. If uninterrupted, however, flow to the dump cylinders continues until a limit switch is tripped when the container rotates approximately 50° relative to its horizontal position, i.e. the full dump position III in FIG. 2.
>
> At the completion of the dump cycle, hydraulic fluid supplied to the dump cylinders 9, 10 is returned to the reservoir 83, and the pivot frame rotates down to return the container to the horizontal position. When the horizontal position is reached, any pressure remaining in the high pressure supply line 89 is removed through a bleed off valve 88 to the reservoir. The container then returns to the home position with fluid from the cylinders 7, 8 returning to the reservoir through return line 86.

It is clear from such language that the movements of the container are controlled strictly by an operator and are completely under the control thereof. Such language is

hardly suggestive of a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position, or of a module which detects a position of the container, or even of a module which controls a movement of the container based at least on a capacity of the container.

Accordingly, Applicants respectfully submit that independent claim 25 as well dependent claim 26, which depends from claim 25 are allowable.

Applicants note, in particular, that LILLEY also fails to disclose, or even suggest:

that the controlling module is a positional sensor (claim 26).

Accordingly, Applicants respectfully submit that the rejection under 35 U.S.C. § 102(b) should be withdrawn.

***35 U.S.C. § 103 Rejection***

Claims 1-24 were rejected under 35 U.S.C. § 103(a) for being allegedly unpatentable over LILLEY in view of U.S. Patent No. 4,534,156 to SMITH. This rejection is respectfully traversed.

The Examiner acknowledges that LILLEY lacks, among other things, a fill sensor or detecting when the container is full. However, the Examiner explains that these features are taught by SMITH and that it would have been obvious to combine the teachings of these documents. Applicants respectfully submit that a *prima facie* case of obviousness has not been established as the applied references fail to teach each and every element of the claims.

Applicants submit that neither LILLEY nor SMITH disclose or suggest the combination of features recited in at least independent claims 1, 17 and 21. Applicants also submit that no proper combination of these documents disclose or suggest the combination of features recited in at least claims 1, 17 and 21.

More particularly, independent claims 1 and 17 each recite, *inter alia,*

> at least one sensor which detects whether the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the full tilt position; and
> a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position.

Additionally, independent claim 21 recites, *inter alia,*

> detecting when the container is full at the first tilt position;
> indexing the container to an intermediate tilt position to enable settling of contents within the container;
> detecting when the container is full at the intermediate tilt position.

As explained above, LILLEY merely discloses a material handler which has a container 3 that can be moved between three distinct positions (see col. 3, lines 19-22). Additionally, while Applicants acknowledge that LILLEY discloses the use of sensors 28 and 29 (see col. 3, lines 63-65), it is clear that such sensors do not detect whether the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the full tilt position. Instead, these sensors 28 and 29 are used "for disabling power to the system when an operator or equipment are in the area of the loading end of the container."

Applicants also respectfully disagree that LILLEY discloses a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position. The Examiner has failed to identify any language in LILLEY which discloses or suggests this feature. Moreover, Applicants submit that the above-noted sensors cannot and do not perform such a feedback control function. Finally, It is clear from the above-noted quoted language at col. 5, lines 20-35 that the movements of the container are controlled strictly by an operator and is completely under the control thereof. Such language is hardly suggestive of a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position.

Applicants emphasize that while LILLEY discloses the use of sensors 28 and 29 to disable the system (see col. 3, lines 63-65), it is clear that such sensors do not and cannot detect when the container is full at the first tilt position, much less, when the container is full at the intermediate tilt position.

With regard to SMITH, Applicants notes that SMITH relates to an apparatus for filling storage boxes with lemons (see col. 1, lines 5-7), and not to an apparatus for loading mail objects. Moreover, while Applicants acknowledge that SMITH discloses the use of a sensor to detect when a bin is filled, it is clear that the disclosed sensor does not detect whether a bucket assembly has reached a fill capacity, much less, at each of the upright position, the intermediate tilt position and the full tilt position.

Instead, the sensor 40 "responds when the bin 28 is filled to a level which will completely fill one box." See col. 3, lines 52-54.

Finally, Applicants submit that while SMITH discloses the use of a sensor 40 which can control the filling of a container (see col. 3, lines 52-54), it is clear that such a sensor does not detect when the container is full at the first tilt position, much less, when the container is full at the intermediate tilt position.

The Examiner is respectfully directed to col. 3, lines 52-68 of SMITH, which discloses the following:

> In the apparatus 10 of the present invention, the photocell device 40 responds when the bin 28 is filled to a level which will completely fill one box. The filling of the bin to such level is indicated by the presence of one or more articles in the path of beam 42, for example, at the level of the top opening 26, whereupon the motor of the belt driving system 16 is de-energized to prevent overfilling. By this arrangement, the belt 14 carries articles toward the diverter bar 22 and the bin 28 only when there is room in the bin for more articles, and not when it is filled.
>
> When the bin 26 is filled, the photocell device 40 actuates the solenoid valve 37, which in turn initiates the action of the pneumatic cylinder 32 to lower the chute 30 to its FIG. 4 position, whereupon articles flow out of the bottom opening 34 of the bin 28, through the chute 30 and into the box 36.

It is clear from such language that the sensor is used merely to indicate when the bin 26 is filled in order to ensure that the box is filled. Such language is hardly suggestive of detecting whether the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the full tilt position, or of a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full

tilt position, or of detecting when the container is full at the first tilt position, much less, when the container is full at the intermediate tilt position.

Moreover, in addition to failing to disclose the combination of features recited in the above-noted claims 1, 17 and 21, Applicants submit no proper combination of these documents discloses or suggests the combination of features recited in claims 1, 17 and 21 or in the above-noted claims which depend from claims 1, 17 and 21.

Applicants also submit that, like LILLEY, SMITH also fails to discloses a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position. The Examiner has failed to identify any language in SMITH which discloses or suggests this feature. Moreover, Applicants submit that the above-noted sensor cannot and does not perform this function.

Applicants note, in particular, that no proper combination of LILLEY and SMITH discloses or suggests:

(i) further comprising a sensor determining whether any variable sized mail holding container is properly positioned within the bucket assembly (claim 2).

(ii) that the intermediate tilt position and the full tilt position minimize damage to the packages or other mail objects (claim 3).

(iii) further comprising at least an additional sensor to detect other positions of the bucket assembly for providing signal controls to at least control movement of the bucket assembly (claim 6).

(iv) that the cradle assembly includes a cradle shaft coupled to a mounting system of a frame assembly (claim 10).

(v) that the cradle assembly further includes lift ribs coupled to a mount assembly of the actuator system (claim 11).

(vi) that the bucket assembly includes a floor assembly and a rear wall assembly for supporting any variable sized containers, the rear wall assembly including a substantially coplanar surface, where one surface of the coplanar surface is raised with respect to another surface of the coplanar surface (claim 14).

(vii) that the raised coplanar surface permits packages to be introduced into a half sized container while minimizing false trips of at least one of the at least one sensors (claim 15).

(viii) that the feedback control system is a positional feedback system associated with the actuator assembly for controlling the movement of the bucket assembly (claim 16).

(ix) further comprising a sensor determining whether the container is properly positioned within the bucket assembly;
a safety sensor associated with the actuator system ensuring shut down of the actuator system based on a detected problem;
at least an additional sensor to detect at least one of an upright and down position of the bucket assembly; and
a chute sensor located proximate to the chute which detects package backlog on the chute (claim 18).

(x) that the feedback control system is a positional system associated with the actuator system (claim 19).

(xi) that the feedback control system includes position sensors providing feedback signals to a controller for indexing the movement of the bucket assembly (claim 20).

(xii) further comprising the steps of detecting when the container has reached full capacity in the upright position and removing the container (claim 22).

(xiii) further comprising the step of detecting whether the container is properly positioned prior to loading the container with the content (claim 23).

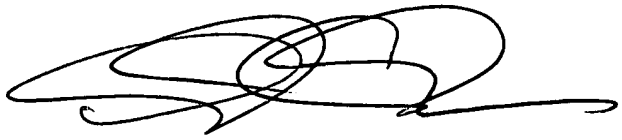
(xiv) further comprising the step of detecting any problems and stopping the loading of the container (claim 24).

Accordingly, Applicants respectfully submit that the above-noted rejection under 35 U.S.C. § 103(a) should be withdrawn.

## CONCLUSION

In view of the foregoing remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed.

Respectfully submitted,
W. BLACKWELL, *et al.*



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